
A Comparison of Programed and Standard Textbooks in College Instruction

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- Finn, James D.;
Bolvin, Boyd M.;
and
Perrin, Donald G.

A Selective Bibliography on New Media and Instructional Technology. Staff Paper Number One, Instructional Technology and Media Project. Los Angeles: School of Education, University of Southern California, April 1964. 54 pp. (NDEA Title VII Project No. B-390.)

This selective bibliography on new media and instructional technology contains 584 references and is organized under the following headings: publications of the Technological Development Project of the National Education Association (1960-1963) and related articles, general audiovisual references, audiovisual equipment, general educational implications of instructional technology, research summaries and comment, communications theory, learning theory and the new media, specific newer technologies (television, language laboratories, teaching machines and programed instruction, 8mm sound film, instructional systems, computers in education, educational data processing), general references on computers of interest to educators, information on storage and retrieval, school buildings and the new technology, articles critical of instructional technology, newer developments leading toward the future, psychological testing, professional rights and responsibilities of teachers (including copyrights and patents), information on general educational implications of automation, bibliographies, guides, indexes, periodicals.

- Fisher, Margaret B.,
and
Malpass, Leslie F.
Purpose

A Comparison of Programed and Standard Textbooks in College Instruction. Tampa: University of South Florida, 1963. 109 pp. (Co-operative Research Project No. 1921.)

To compare some results of programed textbook instruction with those of conventional textbook instruction in a general education behavioral sciences college course.

Procedure

A two-term college course in behavioral science was taught employing two methods: (1) using programed textbooks, and (2) using standard textbooks. Both groups were exposed to the same weekly lectures and attended two one-hour discussion periods, the principal dependent variable being the method of learning textbook material. Subjects were 142 lower division college students in the first semester and 122 in the second semester. Chi-square analysis and Bartlett's Test of Homogeneity showed the two populations to be similar with respect to background and prior achievement variables, although they were secured in the ordinary registration process. Each of the two instructors taught one programed and one standard section. Evaluation of achievement was made on an Instructor Index (on the basis of classroom performance and jointly constructed achievement tests) and on an Examination Index (a common final examination). A locally prepared Course and Teacher Evaluation Form and student reaction sheets were used to obtain student evaluation of the course. Comparison of scores on the Instructor Index and the Examination Index was by analysis of variance.

*Results and
Conclusions*

(1) Few significant differences in mastery of subject matter, as measured by grades, were found between students using programmed textbooks and those using standard textbooks in a college course. Of the 27 analyses of variance, 7 statistically significant differences were found. (2) Two significant differences favored the programmed textbook over the standard textbook in the second term, and for both terms combined on the Examination Index, suggesting that cumulative experience with programmed material may affect performance on examinations. (3) There were significant differences in impressionistic reactions of students, generally favoring programmed materials. Students using programmed textbooks tended to rate higher other kinds of required course readings such as reprints, but tended to report that programmed materials demanded more time and study than they wished to give. (4) Almost 90 percent of the programmed textbook students preferred the vertically programmed text to a horizontally programmed text. (5) Although the teacher variable proved to be statistically significant in five of the analyses, there was no evidence that teacher bias affected the results; and the absence of significant interaction variance on the grade indices suggests that the teacher variable and the textbook variable are not necessarily interrelated.

Guba, Egon,
and
Wolf, Willavene

Perception and Television: Physiological Factors of Television Viewing. Columbus: The Ohio State University Research Foundation, 1964. 128 pp. (NDEA Title VII Project No. 875.)

Purpose

To develop an experimental system for recording of eye-movement data, to collect such data, to analyze these data to identify relevant variables and to develop hypotheses about eye-movement responses to a dynamic visual scene, and to relate the identified variables and patterns to specific subject and stimulus characteristics.

Procedure

Experimental apparatus was developed, consisting of a projector for the presentation of the stimulus materials, a simulated TV set for display of stimulus materials, a helmet-mounted corneal reflection system and TV camera to obtain eye-movement data, electronic controls for the helmet-mounted TV camera, a TV monitor for display of the eye-movement data, and a motion picture camera to record the eye-movement data from the TV monitor. Stimulus materials consisted of a segment from a health telecast in the MPATI "Adventures of Science" series and a short clip from a commercial NBC telecast, "The Lively Ones," based on music from "West Side Story." Subjects were 43 fifth-grade children who met certain physical criteria. Criterion data were obtained from scholastic aptitude scores, content pre-test scores, and content post-test scores. Stimulus materials were displayed on a simulated TV set by rear projection, and the subjects' eye movements over the material were picked up by a small TV camera in the headset and displayed on a TV monitor from which it was photographed on motion picture film. Data were analyzed from the motion picture recordings to determine what objects were looked at and how often, the duration of each look, and the various eye movements.